

Fundamental Forces:

<u>Force</u>	<u>Interaction</u>	<u>Range (m)</u>
Strong Nuclear	nucleon to nucleon	$1\text{E}-15$
Electromagnetic	charge to charge	∞
Weak Nuclear	nucleon to lepton	$.001\text{E}-15$
Gravitational	mass to mass	∞

Nuclear Fission:

- Splitting of a more massive atom into smaller atoms, also releasing neutrons (2 or 3) and energy
- First done in 1939 by Hans and Strassman

Nuclear Fusion:

- Joining together lighter nuclei to make heavier atoms
- Driving force behind all main sequence stars
- In order for this to happen, nuclei must have very high KE
Gases need to get to 1 million Kelvin before fusion occurs
- Two main ways humans trying to do this:

Magnetic confinement

Inertial confinement